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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/232,397	01/15/1999	ALI SALEH	M-7165-US	1881

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EXAMINER

NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/232,397

Applicant(s)

SALEH ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 12/8/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13,33 and 35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-13,33 and 35 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 26&27. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 10, 11, 12, 13, 33 and 35 are rejected under 35 USC 103(a) as being unpatentable over **Sato et al.** (US Pat. No. 5,781,528) in view of **Bentall et al.** (US Pat. No. 6,282,170B1), and further in view of **Commerford** (US Pat. No. 5,920,257).

In claims 1, 3, 10, 33 and 35, **Sato et al.** discloses, in Fig.2, a network comprising nodes 21-28 a plurality of nodes) connecting via links 29, 30, 33, 34 (coupled via links). Node 21 (a first node) detects that node 22 fails, then sends a broadcast message to node 23 (sending a message from a first node to second node) via node 26 (via intermediate node). Each of nodes 21, 26 and 23 looks at its respective Virtual Path table to determine virtual paths VPIs 3, 4, 4096, 4095 connecting the nodes using links 34, 33 (dynamically establishing virtual path by configuring a set of connections between the first node, the second node and intermediate nodes using links). See col.4, lines 55-67 & Fig.7, col.5, line 60 to col.7, line 20. **Sato et al.** does not disclose the virtual path is established by sending a reply message in reply to said message over said intermediate links; and the virtual path is provisioned dynamically. **Bentall et al.** discloses a link between a sender node 63 (a first node) and a chooser node 64 (second node) fails (Fig.2). Refer to Fig.9, the sender node 63 (a first node) sends flood messages to chooser node 64 (sending a message to a second node). Chooser node prepares the most appropriate alternate

Art Unit: 2662

route including at least one hops, for each virtual path, then acknowledges the shortest route for each virtual path by sending a message back to the sender at step 142 (sending a reply message in reply to said message over said intermediate link). See col.7, line 60 to col.8, line 20.

**Commerford** discloses, in Fig.1, RTR 10 detects a network outage and notifies a user via a display. The user selects a dynamically restoration and the RTR 10 generates a restoral route dynamiccally (the virtual path is provisioned dynamically). See col.4, lines 45-65. Therefore, it would have been obvious to one ordinary skill in the art to modify the **Sato et al.** by using the feature of sending a message back to the sender after an alternate route via intermediate link has been selected of Bentall et al.; and applying dynamically route restoration establishing a virtual path of Commerford to restore a virtual path automatically, dynamically when a link fails.

In claims 11 and 12 , **Sato et al.** discloses, each node contains a path information memory means ( data base) storing path information including active route, linkage structures bwteen two nodes (each node maintains a dabase representing a topology of the network). See col.3, lines 40-45.

In claim 13, the limitation of this claim has been addressed in claim 1.

Claims 4, 5, 9 and 10 are rejected under 35 USC 103(a) as being unpatentable over **Sato et al.** (US Pat. No. 5,781,528) in view of **Bentall et al.** (US Pat. No. 6,282,170B1), in view of **Commerford** (US Pat. No. 5,920,257), and further in view of **Medard et al.** (US Pat. No. 6,047,331).

In claims 4 and 5, **Sato et al.** does not disclose terminating the VP by automatically deallocating intermediate links ; and the intermediate links are availble for reuse upon

Art Unit: 2662

deallocation. However, it is a well-known skill in the art for a VP to be automatically deallocated when a call connection is not in use. The deallocated VP will be available for another call connection. Therefore, it would have been obvious to one ordinary skill in the art to use the features automatically deallocated a VP when not in use. The deallocated VP will be available for another connection in the **Sato et al.**

In claim 9, **Sato et al.** does not disclose automatic route restoration. **Medard et al.** disclose, in Fig.1, each of network nodes 12a-12e includes an automatic protection switch (APS) processor 14. Under control of APS processor 14, when a link between a source node and a destination node fails, a secondary path ( virtual path) is automatically used to route signals between the source and destination nodes. See col.10, lines 5-25.

Claim 2 is rejected under 35 USC 103(a) as being unpatentable over **Sato et al.** (US Pat. No. 5,781,528) in view of **Bentall et al.** (US Pat. No. 6,282,170B1), in view of **Commerford** (US Pat. No. 5,920,257), and further inview of **Croslin** (US Pat. No. 5,881,048).

In claim 2, **Sato et al.** does not disclose testing the virtual path by testing each intermediate node and intermediate link. **Croslin** discloses, in Fig.1, the computer 32 analyses network stations 12-17 and links (testing nodes and intermediate links) by using control circuits (circuit) coupled to each network station respectively. See Fig.4 and 10. Therefore, it would have been obvious to one ordinary skill in the art to use the **Croslin** with **Sato et al.** for testing the nodes and links to determine failed locations in the network.

*Allowable Subject Matter*

Art Unit: 2662

Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 6, the prior art does not disclose each intermediate link is deallocated by a respective one of nodes as the terminating message is sent to each node.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Srinivasan et al. (US Pat. No. 6,304,549 B1) discloses Virtual Path Management in Hierarchical Networks.

Azuma et al. (US Pat. No. 6,430,150 B1) discloses Communication Node, Restoration Method and Communication Network.

Commerford et al. (US Pat. No. 6,134,671) discloses System and Method for Dynamically Generating Restoration Routes within a Communications Network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the

Application/Control Number: 09/232,397

Page 6

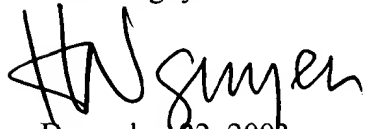
Art Unit: 2662

organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Fax number : 703 872-9314

Hanh Nguyen



December 22, 2003